

**ABSTRACT**

A processor readable medium storing a data structure for supporting one or more packet modification operations is provided. The data structure has a pointer to a sequence of one or more commands stored in a first memory area and implementing  
5 one or more packet modification operations. The data structure also has a pointer to a burst of one or more data or mask items stored in a second memory area for use by the one or more commands.

A method of performing one or more packet modification operations on a packet while located within a first portion of a switch is also provided. This packet  
10 includes a data structure index previously added while the packet was located in a second portion of the switch. In this method, a data structure corresponding to the data structure index is retrieved. This data structure has the format described above.

Using this data structure, the one or more commands are retrieved, and the one or more data or mask items for use by the one or more commands are also retrieved.  
15 These one or more commands are then executed, thereby performing one or more packet modification operations on the packet.